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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,211	04/16/2004	Kenneth A. McQueeney	66396-138	7262

7590 11/29/2005

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EXAMINER

TERESINSKI, JOHN

ART UNIT	PAPER NUMBER
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2858

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H-A

Office Action Summary

Application No.

10/825,211

Applicant(s)

MCQUEENEY ET AL.

Examiner

John Teresinski

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 12-19 is/are rejected.
- 7) ☒ Claim(s) 3-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/4/04, 4/16/04</u> | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2858

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No.

5,001,432 to Wixon.

Regarding claim 12, Wixon discloses an ignition test probe and method including a capacitive probe comprising a body (Fig. 1 element 13) and a single capacitive signal detector (column 2 lines 9-23, Fig. 1 element 1), placing the single capacitive signal detector proximate an exterior of a hybrid or DIS ignition coil housing at a position corresponding to an overlap of a first electric near field corresponding to a first output of a hybrid or DIS ignition coil under test and a second electric near field corresponding to a second output of a hybrid or DIS ignition coil under test (column 4 lines 40-45), the first and second electric near fields being generated when each of the first and second outputs are at a high voltage corresponding to at least a portion of an ignition spark (column 1 lines 56-68, column 2 lines 1-5), using the single capacitive signal detector to simultaneously detect the first electric near field the second electric near field (column 3 lines 35-45) and outputting from the single capacitive signal detector a signal representative of the first electric near field and the second electric near field (column 1 lines 21-34).

Art Unit: 2858

Regarding claim 13, Wixon discloses placing the single capacitive signal detector proximate an exterior of a hybrid or DIS ignition coil housing at a position between a first output of a hybrid or DIS ignition coil under test to a first spark plug and a second output of a hybrid or DIS ignition coil under test to a second spark plug (column 3 lines 35-45, column 4 lines 3-9).

Regarding claim 14, Wixon discloses processing the signal output by the single capacitive signal detector using an amplifier (Fig. 2 element UT).

Regarding claims 15 and 16, Wixon discloses reporting the signal output by the single capacitive signal detector to at least one of a display device (column 1 lines 24-30).

Regarding claim 17, Wixon discloses placing the single capacitive signal detector near a portion of the housing adjacent both the secondary ignition coil and one of the first output and the second output associated with a companion spark plug (column 3 lines 35-45).

Regarding claim 1, Wixon discloses the device and method as described above including a base configured for removable attachment to a hybrid or DIS ignition under test (column 1 lines 42-45), a single capacitive sensor disposed on the base (1), the capacitive sensor having an electrical lead connected thereto, wherein the capacitive probe is configured to simultaneously detect a first electric near field developed by a first high voltage signal in a hybrid or DIS ignition first output to a first spark plug and a second electric near field developed by a second high voltage signal in a hybrid or DIS ignition second output to a second spark plug (column 3 lines 35-46), and wherein the signal output from the capacitive sensor comprises a positive-going signal component from one of the first electric near field and second electric near field and a negative-going signal component from the other one of the first electric near field and second electric near field (column 3 lines 35-46).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wixon in view of U.S. Patent No. 5,453,694 to Miyata et al..

Regarding claim 2, Wixon does not teach a base configured to provide an interface fit with at least two opposing surfaces of the hybrid or DIS ignition housing. Miyata et al disclose an ignition test probe and method including a capacitive probe (column 3 lines 23-40) and a base configured to provide an interface fit with at least two opposing surfaces of an ignition housing (Fig. 9 and 10 element 1E). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a base as taught by Miyata et al. into Wixon for the purpose of detecting a sparkplug voltage in each of the cylinders with a single voltage probe device (column 1 lines 37-47).

Regarding claims 18 and 19, Wixon discloses the claimed invention except for placing the single capacitive signal detector closer to the secondary ignition coil than one of the first output and the second output associated with a companion spark plug, or placing the single capacitive signal detector closer one of the first output and the second output associated with a companion spark plug than to the secondary ignition coil. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the capacitive signal

Art Unit: 2858

detector closer to either the secondary ignition coil or one of the first output and the second output associated with a companion spark plug, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70 C (CCPA 1950)

Allowable Subject Matter

Claims 3-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Regarding claim 3:

The primary reason for the allowance of claim 3 is the inclusion of a fastening device to removably fasten the capacitive probe base to a hybrid or DIS ignition coil housing, and wherein the single capacitive sensor is configured to move between at least a first position and a second position along at least one axis relative to the base so as to permit the capacitive sensor to be positioned between a first output of a hybrid or DIS ignition coil under test to a first spark plug and a second output of a hybrid or DIS ignition coil under test to a second spark plug. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claims 4-11 are allowable due to their dependency on claim 3.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

Art Unit: 2858

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following is cited to further show the state of the art with respect to methods and devices for testing ignition systems:

U.S. Patent No. 5,347,855 to Miyata et al. discloses a misfire detector for use in an internal combustion engine including a capacitive sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Teresinski whose telephone number is (571) 272-2235. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/825,211

Page 7

Art Unit: 2858

ST

JT

November 22, 2005

V. Nguyen

11/23/2005
VINCENT Q. NGUYEN
PRIMARY EXAMINER